TRENDS AND CHALLENGES IN TECHNICAL EDUCATION IN NIGERIA

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Abstract

Nigeria has long been troubled by issues of underdevelopment. Apparently, there exist, an unavoidable choice in providing access to Technical Education and facilitating standard institutions. Thus, promoting an improved Technical Education, however, is more difficult than many have thought. This is because recent findings reveal that the traditional approach to providing advanced Technical Education appears ineffective. The existing policies need to be improved upon by ensuring proper implementation of substantial incentives, extensive pragmatic experimentation and evaluation of educational programmes.

Introduction

Education is a complex and divergent subject to which countless definitions exist. One has to be careful in one's choice of a definition of education. The definition of education as a means of acquiring knowledge, includes skills and values of the society, at home, community and school so that he that acquires it can function effectively and efficiently as a member of the society (Fanfunwa 1974).

Technical education is defined in'the National Policy of Education as that aspect which leads to the acquisition of practical skills as well as basic scientific knowledge (N.P.E., 1981). Science on the other hand can be defined as the search for knowledge and technology and putting that knowledge which makes possible the concept, design, development, production and distribution of goods and services (Gibson 1976). These two concepts can improve the well being of society. It is generally believed that Science and Technology can help to revolutionize Technical Education, using Technology to develop it. Science and Technology has also assisted in the area of distant learning. But inefficient infrastructural facilities which make such innovations effective as it relates to Education have tended to make Technical education ineffective.

According to John Dewey (1952) Technical Education differs from Traditional Education. Technical education stresses on pragmatism and learning by doing, which are synonymous with the modern day Industrial Attachment. However, there is an increasing awareness that the falling standard in education in Nigeria will result in real losses in the long term and further more will undermine the basic objective of scientific issues of development, which helps to enhance sustainable improvement of human welfare and the country at large. For industrial development and recent scientific policies in Nigeria to be realized, its education has to be anchored on scientific and technological training (Mumah, 2000).

Synopsis of Technical Education in Nigeria

The earliest enactment on technical education in Nigeria was the 1882 education ordinance. Thereafter, the colonial government became more and more interested in the education of the natives by way of enacting a series of ordinance, one after another, as well as more financial commitment to the education sector. The Phelps-Stokes Commission report of 1926, titled Education in Africa greatly influenced subsequent education efforts in Nigeria.

The Phelps-Stokes commission that was set up to evaluate educational provisions in Africa found serious lapses in the African educational policy. It therefore came out with strong recommendations for adapting education to the needs of various African Communities (Fafunwa, 1974; Taiwo, 1980; and Osokuge, 1987). Scholars have maintained that the recommendation of the commission greatly influenced the 1925 memorandum on education in British Colonial territories. The memorandum, which set out the principles on which the education system of the colonies should be based is summarized by Fafunwa (1979) as follow:

> education should be adapted to local conditions in such a manner as would enable it to conserve all sound elements in local tradition and social organization, while at the same time functioning as an instrument of progress and evolution;

- technical and vocational training should be carried out with the help of government departments concerned and under their supervision;
  the system should be established which, although varying in local conditions, will provide elementary education for boys and girls, Secondary education of several types, technical and vocational education, institutions of higher education which might eventually develop into University.

This memorandum, more than any other, guided the .Nigerian Educational Policy and development from 1925 to 1945 (Fafunwa 1979).

Mr. Harlow and Mr. Thorp's report in 1949 on Technical Colleges/institutions for Nigeria marked another milestone for the development of Technical education in Nigeria. This became the basis for the establishment of the Nigerian College of Arts, Science and Technology in 1952 with branches in Ibadan, Enugu and Zaria.

Later, the Ashby Commission paved way for Technical and Vocational Education by way of recommending the creation of Technical streams in secondary schools from where the students could obtain technical knowledge up to the level of City and Guilds Certificate of London.

The Ashby report is an important reference to the growth and development of Technical education as a whole in Nigeria by way of influencing government to pay more attention to it as an important basis for meeting the country's manpower needs. Evidence of government attempt to encourage technical education beyond secondary level resulted in the creation of many Colleges of Science and Technology. Among them are Ibadan and Kaduna Polytechnic and Industrial Training Fund Centres, etc. (Ukeje, 1979).

In the search for National development for science and Technical education, the 1981 revised National Policy on Education orientates that, among other things, technical education is expected to provide the following:

trained manpower in applied science, technology and commerce particularly at sub-professional grades;
technical knowledge and vocational skills necessary for agriculture industrial, commercial and economic development;
people who can apply scientific knowledge to the improvement and proffer solutions to environmental problems for the use and convenience of man.

These expectations have come to be the broad focus in Nigerian Educational System, which, as at this present time, has led to the establishment of more Polytechnics, University of Technology and Agriculture, and related monotechnic institutions.

The objectives contained in the curriculum of Technical education, as outlined in the National Policy on Education, with incorporation of the vocational subjects at the early phase of the educational system are without doubt laudable. The Federal Government has further highlighted measures for the sustenance of technical education in Nigeria. These include:

to observe attitudes of respect and appreciation of the roles of technology in the Society. This is done by introducing elementary technology into the curriculum of the School as early as possible for pupils to be exposed to moulding, repairing and assembling of models; for government to improve the immediate and long term prospects of technicians in relation to graduate and other professionals with respect to their status and remunerations.

Technical Education in Nigeria (The Challenges)

Based on Federal government policy statement on education, as highlighted above, it is proper to enumerate whether the right measures have been taken towards actualizing the proclamation. The policy has been established to enhance the practical aspect of education, towards achieving a prospective technological development in Nigeria. Nevertheless, the policy alone, despite its well-planned nature, does seem inadequate. The implementation suffers hiccups in execution. This is manifested, among other things, in:

1. inadequate funding for technical and vocational training facilities and other educational activities;
2. low level of staff motivation;

3. shortage of skilled personnel in science, engineering and information technology;
4. limited materials due to lack of access to current literature and modern technique.

It is obvious, from the above, why science and technical education has not improved effectively and efficiently in Nigeria. While the science and technical education is bedeviled by problems, the nation's technological know how is not faring any better. This is attested to by the table below.

Tablet: Nigerians Graduating in Science and Technology (1988-1992)

S/N	Category	1988	1989	1990	1992
1.	No. Graduating in Science	3,918	3,281	2,885	2,299
2.	As % of all graduating Students	15.4	11.9	10.3	11.97
3.	No. Graduating in Science & Tech.	2,112	1,954	1,543	1,397
4.	As % of all graduating students	8.8	6.9	5.5	7.3
5.	No of Post Graduates in Science	420	474	620	276
6.	As % of all graduating students	8.2	9.2	12.4	7.2
7.	No. of Post Graduates	278	219	305	112
8.	As % of ail graduating Post Graduates	5.3	4.4	6.1	2.9
9.	Govt. Expenditure on Science & Tech (Nm)	134.6	169.6	201.8	292.1
10.	As % of Gross Domestic Product (GDP)	0.09	0.08	0.08	0.05

Source: NUC Statistical Digest on Nigerian Universities 1988 - 1992 FO$, Abstracts of Statistics 1995 Edition.

From the foregoing, it is clear why Nigeria, and indeed most African countries, is dependent on foreign technology. This should constitute a source of concern to well meaning Nigerians. Of course, only the Government has power and command over resources to act as midwife, promoter, and the protector, with which it can improve science and technical education. According to Mummah (2000), recent increase in funding of research and development of Science and Technical education are good visions for which Technical Education in the 21^{si} Century can be improved for the over all developmental objectives of the Nation's quest for technological advancement. Thus government, according to Mummah (2002), in sustaining its current drive should ensure the following:

determination of the direction of technological growth, preferably, with the assistance of research institutions, private and public sectors;
setting developmental goals;

- devising means of achieving set goals (and facilitating this by timely funding);
- evaluating progress of development efforts periodically and revising goals and programmes based on realistic resources available to project;
- closer links between Polytechnics/Monotechnics and the Industry should be encouraged.

Conclusion

Nigeria must endeavor and encourage her scholars to embrace research and development if she must move forward technologically. An effective research and development programme specifically in the spheres of science and engineering will enhance developmental goals. The evaluation of programmes periodically, coupled with closer links between polytechnics vis-a-vis

monotechnics alike, must be on a sustainable basis. All the foregoing can be realized and be appreciated by all under a regime of adequate funding of programmes, and incentives for purpose, motivation and productivity.

References

Fafunwa, A.B. (1974). *History of Education in Nigeria.* Britain: Hanzel Hatson and Viney Ltd.

Federal Government of Nigeria (1981). *The National Policy on Education.* Lagos: The Government Press. Pp.22.

Federal Government of Statistics (FOS 1996). Annual Abstract of Statistic and National Planning Commission.

Gibson, T.A. (1976). Technology Transfer and Economic Progress, Business Economics. John

Dewey (1952). Selected Educators and Educational Thinkers Pp 48-53

Mummah, S.N. (2000). Exploring Polytechnic Industry -Linkage for Research and Development Purpose, Paper Presented at the National Workshop on Research Awareness for Polytechnics' Academic Staff.

Osokoya, 1.0. (1987). 6-3-3-4 Education in Nigeria: History, Strategies and Problems.

Taiwo, C.O (1980). *The Nigerian Educational System Past, Present and Future.* Nigeria: Thomas Nelson Ltd.

Ukeje, B.O. (1979). *Foundations of Education.* Benin: Ethiope Publishing Corporation.